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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/698,114

10/31/2003

Rob Ellins

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EXAMINER

TAMAI, KARL I

ART UNIT

PAPER NUMBER

2834

MAIL DATE

DELIVERY MODE

09/17/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/698,114	Applicant(s) ELLINS ET AL.	
	Examiner KARL I.E. TAMAI	Art Unit 2834	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 6/25/2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-32 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☒ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Oath/Declaration

1. The oath or declaration is defective. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02.

The oath or declaration is defective because:

It does not identify the mailing address of each inventor. A mailing address is an address at which an inventor customarily receives his or her mail and may be either a home or business address. The mailing address should include the ZIP Code designation. The mailing address may be provided in an application data sheet or a supplemental oath or declaration. See 37 CFR 1.63(c) and 37 CFR 1.76.

It does not identify the city and either state or foreign country of residence of each inventor. The residence information may be provided on either on an application data sheet or supplemental oath or declaration.

The oath and data sheet are defective because the mailing address and residence of Christian Fleury is incomplete.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-4, 9, 10, 31, and 32 are rejected under 35 U.S.C. 102(b) as anticipated by Mihalko (US 4937485). Mihalko teaches a surgical tool having a housing 31 with an electrical power source 9; an output shaft 11 extending from the housing 31 to a

Art Unit: 2834

workpiece 7 with a rotor 13 coupled to the output shaft 7, and with a stator having: a winding 19 selectively connectable (see figure 6) to the electrical power source 9 ; and a magnetically conductive portion disposed about the rotor and comprising a plurality of laminations 29, wherein one or more of the plurality of laminations has a thickness of less than about 0.25 mm (.006-.007 inches or less = .152 - .178 mm or less, which is about 0.2mm)(paragraph 6, lines 64-66), where the plurality of laminations being separated from each other by an oxide insulator coat 33 on the lamination, where selectively connecting the electrical power source and the stator windings imparts rotary motion to the output shaft via the rotor. Mihalko literally teaches the motor can be driven at 70K rpm with no heat rise, which would allow the motor to be operated at speeds greater than 70K rpm.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was

Art Unit: 2834

not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claim 5-8, 11, and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by Mihalko (US 4937485) and West (US 4797602). Mihalko teaches the thickness of the stator lamination is a result effective variable for minimizing eddy current losses (col. 6, line 63). Mikalko teaches every aspect of the invention except the thickness of the lamination being about 0.1 mm, less than 0.15 mm, less that 0.1 mm. West teaches the lamination thickness is about 0.04 to 0.12 mm. It would have been obvious to a person of ordinary skill in the art at the time of the invention to construct the motor of Mihalko with the thickness of the lamination being about 0.1 mm, less than 0.15 mm, less that 0.1 mm because West teaches a thin lamination reduces eddy currents, and because it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. (see *In re Bosch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

7. Claims 13-18 are rejected under 35 U.S.C. 102(b) as being anticipated by Mihalko (US 4937485) and Wallner et al. (Wallner)(US 6107704). Mihalko teaches every aspect of the invention except the diameter of the housing being less than 30, 25, 20, 16, or in the range of 20-22 or 15-16 mm. Mihalko teaches a small motor with a housing diameter of approximately 15mm to provide a micro motor with minimal

Art Unit: 2834

dimensions. It would have been obvious to a person of ordinary skill in the art at the time of the invention to construct the motor of Mihalko with the housing being less than 30, 25, 20, 16, or in the range of 20-22 or 15-16 mm because Wallner teaches micro motors should have small dimensions for micro sized transducers and because it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. (see *In re Aller*, 105 USPQ 233).

8. Claims 19-22 are rejected under 35 U.S.C. 102(b) as being anticipated by Mihalko (US 4937485) and Lou et al. (Lou)(US 5990584). Mihalko teaches every aspect of the invention except length of the stator being less than 100, 60, 50, or in the range of 40-50 mm. Lou teaches a small motor with a length of 45 mm. It would have been obvious to a person of ordinary skill in the art at the time of the invention to construct the motor of Mihalko with the stator core length of 45 mm because Lou teaches that permanent magnet motors are designed to be small with low voltage and good torque characteristics.

9. Claims 23 and 24 are rejected under 35 U.S.C. 102(b) as being anticipated by Mihalko (US 4937485) and Lou et al. (Lou)(US 5990584) and Wallner et al. (Wallner)(US 6107704). Mihalko teaches every aspect of the invention except length of the housing outer diameter being less than 25 mm and the stator being less than 50 mm or the housing outer diameter being less than 22 mm and the stator being less than 50

Art Unit: 2834

mm. Lou teaches a small motor with a length of 45 mm to optimize torque and weight.

Wallner teaches a small motor with a housing diameter of approximately 15mm to provide a micro motor with minimal dimensions. It would have been obvious to a person of ordinary skill in the art at the time of the invention to construct the motor of Mihalko with the stator core length of less than 50 mm because Lou teaches that permanent magnet motors are designed to be small with low voltage and good torque characteristic, and with the outer diameter less than 25 or 22 mm because Wallner teaches micro motors should have small dimensions for micro-sized transducers.

10. Claims 25 and 26 are rejected under 35 U.S.C. 102(b) as being anticipated by Mihalko (US 4937485) and Rosenberry (US 4392072). Mihalko teaches every aspect of the invention except the plurality of laminations being annealed ribbon shaped material. Rosenberry teaches the laminations are formed by turns of a ribbon shaped material with oxide insulation to provide a core from commercially available magnetic ribbon (col. 3, lines 50-65). with reduced eddy current losses. It would have been obvious to a person of ordinary skill in the art at the time of the invention to construct the motor of Mihalko with the being a wound ribbon material to utilize commercially available material to form core with reduced eddy current losses as taught by Rosenberry.

11. Claim 27 is rejected under 35 U.S.C. 102(b) as being anticipated by Mihalko (US 4937485) and Rosenberry (US 4392072), in further view of West (US 4797602).

Mihalko teaches the thickness of the stator lamination is a result effective variable for

Art Unit: 2834

minimizing eddy current losses (col. 6, line 63). Mihalko and Rosenberry teach every aspect of the invention except the thickness of the lamination being less than 0.15 mm. West teaches the lamination thickness is about 0.04 to 0.12 mm. It would have been obvious to a person of ordinary skill in the art at the time of the invention to construct the motor of Mihalko and Rosenberry with the thickness of the lamination being less than 0.15 mm because West teaches a thin lamination reduces eddy currents, and because it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. (see *In re Bosch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980)).

12. Claim 28 is rejected under 35 U.S.C. 102(b) as being anticipated by Mihalko (US 4937485) and Rosenberry (US 4392072) in further view of Wallner et al. (Wallner)(US 6107704). Mihalko and Rosenberry teach every aspect of the invention except length of the housing outer diameter being less than 25 mm. Wallner teaches a small motor with a housing diameter of approximately 15mm to provide a micro motor with minimal dimensions. It would have been obvious to a person of ordinary skill in the art at the time of the invention to construct the motor of Mihalko and Rosenberry with the outer diameter less than 25 mm because Wallner teaches micro motors should have small dimensions for micro-sized transducers.

13. Claims 29 and 30 are rejected under 35 U.S.C. 102(b) as being anticipated by Mihalko (US 4937485), Rosenberry (US 4392072), and West (US 4797602), in further

Art Unit: 2834

view of Lou et al. (Lou)(US 5990584) and Wallner et al. (Wallner)(US 6107704).

Mihalko, Rosenberry, and West teach every aspect of the invention except length of the housing outer diameter being less than 25 mm and the stator being less than 50 mm.

Lou teaches a small motor with a length of 45 mm to optimize torque and weight.

Wallner teaches a small motor with a housing diameter of approximately 15mm to provide a micro motor with minimal dimensions. It would have been obvious to a person of ordinary skill in the art at the time of the invention to construct the motor of Mihalko, Rosenberry, and West with the stator core length of less than 50 mm because Lou teaches that permanent magnet motors are designed to be small with low voltage and good torque characteristic, and with the outer diameter less than 25 mm because Wallner teaches micro motors should have small dimensions for micro-sized transducers.

Response to Arguments

14. Applicant's arguments with respect to claims 1-32 have been considered but are moot in view of the new grounds of rejection. The examiner acknowledges that the Applicant is attempting provide a new oath for Christian Fleury.

Conclusion

15. Applicant's amendment necessitated the new grounds of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

Art Unit: 2834

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karl I.E. Tamai whose telephone number is (571) 272 - 2036.

The examiner can be normally contacted on Monday through Friday from 8:00 am to 4:00 pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Darren Schuberg, can be reached at (571) 272 - 2044. The facsimile number for the Group is (571) 273 - 8300.

Art Unit: 2834

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Karl I Tamai/
PRIMARY PATENT EXAMINER
September 11, 2008